

REMARKS

This amendment is responsive to the office action mailed December 12, 2006. Claim 38 has been cancelled without prejudice, leaving claims 1-7, 9-24 and 36 pending in the application. Reconsideration of the claim rejections is respectfully requested in view of the following remarks.

AMENDMENTS TO THE SPECIFICATION

Minor amendments have been made to the specification to even more positively point out that a non-linear or "non-flat" surface is formed for either the exterior surface of the dielectric insert or the interior surface of the waveguide component. Again, this non-flat construction is generally opposite to what is disclosed in the Burger et al and Holak et al references. This is also not new matter, as the non-flat configuration for the dielectric insert in the waveguide component is clearly shown in the drawings of the present application. Thus, this amendment to the specification does not represent new matter.

CLAIM REJECTIONS UNDER 35 U.S.C. § 112, FIRST PARAGRAPH

Claims 1, 9, 12, 16, 36 and 38 were rejected under 35 U.S.C. §112, first paragraph as containing subject matter which was not sufficiently described in the specification of the application at the time of filing. This rejection is respectfully traversed and reconsideration is requested. The feature of the dielectric member having a base portion that is about equal to the diameter of the opening in the tubular waveguide component is structure that was clearly and unambiguously shown in the drawings. The need for calling out this feature with greater particularity in the written specification only became apparent in view of the references being cited by the examiner. It is well established that material that is clearly and unambiguously shown in

the drawings of an application, and that would be understood by those of ordinary skill in the art, is not new matter. Reconsideration and withdrawal of this rejection is therefore respectfully requested. The undersigned notes that the Examiner's Final Office Action appears not to have taken into consideration the limitation pertaining to this feature that was added into the independent claims. The structure would eliminate, or virtually eliminate, the discontinuities and reflections of an electromagnetic wave signal that would result in each of the Burger et al and Holak et al devices.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-3, 5-7, 9-24 and 36 were rejected under 35 U.S.C. section 103a as being unpatentable over Burger et al in view of Holak et al.

Again, in view of the structural differences set forth in the independent claims, and particularly the additional language of the claims reciting that the base portion of the dielectric number is approximately equal in diameter to an opening in one end of the tubular waveguide member, it is believed that this rejection has been rendered moot. As an additional basis for withdrawal, the independent claims have been amended to more positively recite that at least one of the outer surface of the dielectric insert, or the inner surface of the tubular waveguide member, forms a "non-flat" shape. This structure is also not disclosed or suggested from the Burger et al and Holak et al references. Regarding Burger et al, as explained in the previous response, Figures 2 and 3 illustrate the dielectric insert 27 having a base portion that is larger than the opening in which the dielectric rests, and also which is flat over its usable portion or length. The interior surface of the metal horn 25 in Figures 2 and 3 is also flat. This is in direct contrast to the various embodiments disclosed in the present application, in which one or the other

of the exterior surface of the dielectric insert, or the interior surface of the waveguide member, are non-flat (or put differently, non-linear). This is a principal feature of the embodiments described in the present application. This feature provides the waveguide apparatus with a reduced, more linear frequency cut-off profile for electromagnetic wave energy traveling into the waveguide. Importantly, this feature allows a phased array antenna to be designed with a desired operating bandwidth that is not constrained by the cut-off frequencies imposed by the waveguide with which it is being used. The examiner will note that this feature is completely absent both in the written portion of the Holak et al and Burger et al references. For at least these reasons, reconsideration and withdrawal of the obviousness rejection of the above-listed claims is respectfully requested.

CLAIM REJECTION UNDER 35 U.S.C. §102(B)

Claim 38 was rejected as being anticipated by Burger et al. Claim 38 has been cancelled without prejudice. Accordingly, this rejection has been rendered moot.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: March 7, 2006

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